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ABSTRACT

A content analysis was performed to determine the trends in the field of educational technology for the period October 1, 1994 through September 30, 1995. Sources for the analysis included five leading professional journals in educational technology, papers given at annual conventions of three professional associations, dissertations from five universities that have a high level of doctoral productivity, and the educational technology documents that have been entered into the ERIC database. The analysis was complemented by the examination of supplementary documents to confirm the trends indicated in the content analysis. This Digest highlights the trends identified in the study. Trends reveal that: (1) computers are pervasive in schools and higher education institutions--virtually every student in a formal education setting has access to a computer; (2) networking is one of the fastest growing applications of technology in education; (3) access to television resources in the school is almost universal; (4) advocacy for the use of educational technology has increased among policy groups; (5) educational technology is increasingly available in homes and community settings; (6) new delivery systems for educational technology applications have grown in geometric proportions; (7) there is a new insistence that teachers must become technologically literate; and (8) educational technology is perceived as a major vehicle in the movement toward education reform. (Contains 11 references.) (Author/AEF)

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Trends in Educational Technology 1995
An ERIC Digest

by Eric Plotnick

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Trends in Educational Technology 1995

by Eric Plotnick

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This Digest highlights the trends identified in the study. For a full discussion of the study methodology and findings, the reader is referred to the source noted above.

TREND 1: Computers are pervasive in schools and higher education institutions. Virtually every student in a formal education setting has access to a computer.

In 1988-89, the student/computer ratio was 22:1; in 1995, it was 12:1 (Hayes & Bybee, 1995). While numbers alone cannot determine the nature, extent and quality of use, they are indicators of availability. Access is the first step to use. In school districts, personnel most likely to have computers are instructional technology specialists, special education teachers, and curriculum supervisors (QED, 1995a). Primary locations for computer use in K-12 schools are in computer laboratories and library media centers.

TREND 2: Networking is one of the fastest growing applications of technology in education.

The growth of the Internet and the World Wide Web is credited for the stimulus in networked communications in education. Computers with modems provide access to networks. In the 1994-95 school year, modems existed in 29% of elementary schools, 39% of middle/junior high schools, and 51% of senior high schools (QED, 1995b). This is an increase from 1991-92 when 11% of elementary schools, 20% of middle/junior high schools, and 30% of high schools had modems. Seventy-five percent of public schools have access to some kind of computer network, e.g., a local area network (LAN) or a wide area network (WAN), but only 30% of public elementary schools and 49% of secondary schools have Internet access (Heaviside et al., 1995).

TREND 3: Access to television resources in the school is almost universal.

Quality Education Data (1995a) reported that all but two percent of public schools in the United States have videotape recorders. About 75% of schools have cable service and 17% have satellite dishes. The most frequently used in-school television programs were supplied by the Public Broadcasting Service (PBS), the Discovery Channel, and Cable News Network (CNN) (Malarkey-Taylor Associates, 1995).

TREND 4: Advocacy for the use of educational technology has increased among policy groups.

A survey of school priorities conducted by the Northwest Regional Laboratory for Research and Development (Northwest Report, 1995) discovered that educational technology is one of the six top issues in schools today. For the first time in history, there is an Office of Educational Technology in the U.S. Department of Education. This office has prepared a long-range national plan for the use of technology in education (Roberts, 1996). In 1995, the Office of Educational Research and Improvement awarded five grants for Regional Technology Centers which will provide technical assistance to schools. At its 1995 convention, the National Education Association focused five resolutions on educational media and technology and discussed the importance of preparing new teachers to use technology.

TREND 5: Educational technology is increasingly available in homes and community settings.

A study by the Software Publishers Association (Heller Report, 1996 as cited in "CD-ROM software," 1996) reported home sales of education-oriented CD-ROMs increased 136% during the first half of 1995. Another study reported that nearly one half of all American households own a computer, and 17% of those who do not already own one plan to buy a computer in 1996. Public libraries are beginning to offer network access and many provide computers and software for personal use.

TREND 6: New delivery systems for educational technology applications have grown in geometric proportions.

Revolutionary developments in technology have replaced the evolutionary pace of previous years. These developments, referred to as delivery systems, focus on hardware, software, communications media, and strategies for use. The number of public schools using CD-ROM has increased nearly 250% since 1988. Ten percent of elementary schools, 22% of middle/junior high schools and 37% of high schools had satellite dishes in 1994-95. Use of communication networks including the Internet is in a continuous upswing. Distance education is active at all levels and includes the use of computer networks for delivery of instruction.

TREND 7: There is a new insistence that teachers must become technologically literate.

Teacher education in the application of technology in the classroom is still a high priority need. One sign of increasing interest and action in this area is the publication of a new periodical, *Journal of Technology and Teacher Education*, published by the Association for the Advancement of Computing in Education. The authors are teachers and teacher educators who are actively participating in the movement toward technological "literacy" for themselves and their students. But *The National Education Goals* (1995) reported that despite the many changes in educational technology and student assessment strategies occurring in 1994, only half of all teachers reported any professional development opportunities in those areas.

TREND 8: Educational technology is perceived as a major vehicle in the movement toward education reform.

The movement for restructuring education in schools across the United States has generated proposals and plans for reform of the entire educational system. Virtually every proposal or plan includes educational technology as one of the major vehicles for implementing change. One of the key documents published by the Office of Educational Research and Improvement is *Using Technology to Support Education Reform* (Means et al., 1993). This publication spells out the roles and functions of technology in the education reform process. In an overview of educational telecommunications development as of 1994, Hezel (1994) reports that ". . .school 'restructuring' and educational reform are influencing the adoption and use of telecommunications . . ."

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